Project Tracking No.: E-010-FY03-ITD

Return on Investment Program Funding Application (FY 2003 Request)

This is an electronic template. Please enter your responses on this document. Only electronic submittals of this template will be accepted. Proposals submitted after the designated due date may not receive funding consideration.
FINAL AUDIT REQUIRED: The Enterprise Quality Assurance Office of the Information Technology Department is required to perform a final project outcome audit, after implementation, for all Pooled Technology funded projects.

SECTION I: PROPOSAL

Date: June 14, 2001

Agency Name: Information Technology Department

Project Name: Campus Backbone Redesign

Expenditure Name:

Agency Manager: Patricia Clark

Agency Manager Phone Number / E-mail: 281-7649 pat.clark@itd.state.ia.us

Executive Sponsor (Agency Director or Designee): Russ Rozinek

Request For ROI Application Waiver:

Agencies are required to complete this funding application when requesting funds for any project, any IT expenditure costing over $100,000, or any non-routine IT expenditure. If you feel there is compelling reason to waive this requirement, please provide (in the box provided below) a brief description of the project or expenditure, the budget amount, and a rationale for the waiver request. Until a decision is made regarding your waiver request, it is not necessary to complete any other portion of this application. The ITD Enterprise Quality Assurance Office will convey waiver request decisions within five working days of receipt.

Explanation: N/A

A. Project or Expenditure Rationale

Is this project or expenditure necessary for compliance with a Federal standard, initiative, or statute? ☐ **YES** (If "YES," explain) ☒ **NO**

Explanation:

Is this project or expenditure required by State statute? ☐ **YES** (If "YES," explain) ☒ **NO**

Explanation:

Does this project or expenditure meet a health, safety or security requirement?
☐ **YES** (If "YES," explain) ☒ **NO**

Explanation:

Is this project or expenditure necessary for compliance with an enterprise technology standard?
☒ **YES** (If "YES," explain) ☐ **NO**

Explanation: Service Level Agreements (SLAs) are required by IT Enterprise Standards. This project enhances ITD's ability to ensure that networking support SLAs are delivered as intended, consistent with agreed upon quality requirements.

Is this project or expenditure consistent with meeting the goals and objectives of the State's strategic plans?
☒ **YES** (If "YES," explain) ☐ **NO**

Explanation: The goals and objectives of this project are consistent with the Governor's Accountable Government initiative. It supports other strategic initiatives such as 21st Century Learning, Core Network Services/managed desktop, and 100%e by improving network service delivery quality.

Is this a "research and development" project or expenditure? ☐ **YES** (If "YES," explain) ☒ **NO**

Explanation:

B. Project or Expenditure Summary

1. Provide a pre-project or pre-expenditure (before implementation) and a post-project or post-expenditure (after implementation) description of the impacted system or process. In particular, note if the project or expenditure makes use of information technology in reengineering traditional government processes.

Response: Pre:The current campus computer backbone has proven to be a stable means of connecting computer networks in state government. Post: Technology improvements will be put in place that allow the computer network to scale (increase capacity) to meet growing bandwidth and availability requirements of new applications . This project targets the underlying infrastructure for computer networking on the Capital campus and once implemented will make improvements in speed, simplify the technology used, build in redundancy for greater reliability.

2. Summarize the extent to which the project or expenditure improves customer service to Iowa citizens or within State government. Included would be such items as improving the quality of life, reducing the government hassle factor, providing enhanced services, improving work processes, etc.

Response: The enhanced network will provide citizens as well as staff more secure, faster, more reliable connections to computing and data resources on the network and between data networks on campus. It improves work processes by supporting central management of desktop computers and servers.

3. Identify the main project or expenditure stakeholders and summarize the extent to which each, especially citizens, is impacted. In particular, note if the project or expenditure helps reconnect Iowans to State government.

Response: Citizens will be able to transact business with the State on-line in real time with little or no noticeable problems. State government users of the network will have faster links between networks. Improved switching and routing methods will increase throughput. Employees will have economical access to training - at their workstations - to effectively serve citizens.

IT PROJECT EVALUATION

SECTION II: PROJECT ADMINISTRATION

A. Agency Information

1. Project Executive Sponsor Responsibilities: The sponsor must have the authority to ensure that adequate resources are available for the entire project, that there is commitment and support for the project, and that the organization will achieve successful project implementation.

Response: No response required.

2. Organization Skills:
   a. List the project management skills necessary for successful project implementation
   b. List the project management skills available within the agency
   c. List the source(s) of project management skills lacking within the agency
   d. Summarize relevant agency project management experience and results

Response: a. The project requires IT networking project management skills, the knowledge to develop the plan and the skills necessary to install and implement the hardware and software. Two ITEE's and a Cisco engineer developed the network design. ITD personnel will do the installation and management.
b. Networking project management skills available in ITD.
c. N/A
d. previous project to upgrade the campus network completed successfully by this team approximately 4 years ago.

B. Project Information

1. History:
   a. Is this project the first part of a future, larger project? If so, please explain.
   b. Is this project a continuation of a previously begun project? If so, please explain project history, current status, and results.

Response: This is a stand-alone project begun in FY01 and planned to be implemented in phases over 2-3 years. Planning and design phase has been completed, reviewed by CIO and approved, and the initial hardware has been purchased. Installations will begin in FY02 and extend into FY03 for not only hardware but upgrades of old fiber plant and physical environments (security, cooling, and electrical) and expansion of service.

2. Expectations: Describe the primary purpose or reason for the project.

Response: Our mission is to redesign the campus computer network to provide greater reliability, increased capacity, and scalability to meet changing and growing requirements of information technology initiatives. The initial phase addressed upgrades to the core of the campus network. Additional upgrades are anticipated for security, cooling and electrical facilities, installation of new service where needed, and expansion of services provided.

3. Measures: Describe the criteria that will be used to determine if the project is successful.

Response: A campus computer network that is high-speed and able to meet increasing bandwidth requirements of key initiatives such as 21st Century Learning and e-government processes; built over multiple paths to ensure greater availability; and flexible and scalable to allow growth and changing applications. Meet all requirements in SLAs developed with agencies receiving service from the network.

4. Environment: List the project participants (i.e. single agency, multiple agencies, State government enterprise, citizens, associations, or businesses, etc.).

Response: Information Technology Department (ITD) staff and Cisco (equipment vendor). Coordination with Iowa Communications Network (ICN) for fiber installation. Some coordination with customer agencies will be required, e.g. scheduling outages for equipment replacements.

5. Risk: Describe the project risks which may be internal or external to State government, i.e. implementing versus not implementing project, changing technology, potential cost overruns, changing citizen demand or need, etc.

Response: Failure to provide adequate network services to a location could mean inability of agency users at that site to participate in things such as 100%e or 21st Century Learning. The network infrastructure has to be able to support the demands of services and new technologies for speed, bandwidth and reliability. Failure to provide proper physical environment for network hardware could result in outages. Computer network is designed to support efficient delivery of "core computing services" to workers. Failure to provide these centrally means higher costs and fewer workers with access to them. eGovernment depends on state employees having network access to the data they require to serve citizens.

6. Security / Data Integrity / Data Accuracy / Information Privacy
   a. List the security requirements of the project
   b. Describe how the security requirements will be integrated into the project and tested
   c. Describe what measures will be taken to insure data integrity, data accuracy and information privacy.

Response: a. Hardware and software to be physically secured and access restricted. Network to meet audit requirements defined in SLAs with agencies and customers.
b. Will be using existing network hardware sites.
c. Access to console, management functions of hardware/software limited to ITD Networking Team personnel using a combination of physical security and secure access methods.

7. Project Schedule
   Describe general time lines, resources, tasks, checkpoints, deliverables, responsible parties, etc.

Response:

Activity	Responsible	Start/Finish
Design Phase		Mar 02/Apr 02
Produce recommended design & implementation plan	Network Staff, Cisco	
Secure ITD management approval	Russ Rozinek; Richard Varn	
Determine physical requirements (power, space, rack, fiber)	Network Staff, ICN	
Procurement Phase		Jul 02/Sep 02
Facilities - secure space, get power, rack, fiber quotes	Network Staff, ICN, DGS	
Approval	Russ Rozinek	
Issue orders	Network Staff	
Hardware - get quotes	Network Staff	
Approval	Russ Rozinek	
Issue orders	Network Staff	
Deployment Phase		Sep 02/June 03
Facilities Preparation	Network Staff, ICN, DGS	
Hardware/Software Installation	Network Staff	

SECTION III: TECHNOLOGY (In written detail, describe the following)

A. Current Technology Environment

1. Software (Client Side / Server Side / Midrange / Mainframe):
   a. Application software
   b. Operating system software
   c. Major interfaces to other systems, both internal and external

Response: a. N/A
b. Cisco IOS
c. N/A

2. Hardware (Client Side / Server Side / Mid-range / Mainframe):
   a. Platform, operating system
   b. Storage and physical environment
   c. Connectivity and bandwidth
   d. Logical and physical connectivity
   e. Major interfaces to other systems, both internal and external

Response: a. Core network of Cisco 7507 router and 5500 switches running Cisco IOS; peripheral Cisco 2900, 3900, 3500, LS1010 switches. ATM backbone, LANE (LAN emulation) services for token ring and ethernet attachment.
b. Core network housed in ITD Operations, B Level, Hoover Building. Peripheral equipment in locked communications closets or secure operations areas around the campus.
c. OC3 between buildings; 10/100Mb ethernet; very limited gigabit ethernet; 16Mb token ring
d. This network connects nearly every agency LAN on the campus as well as a connection to the wide area network for attachment to resources off campus; connection to mainframe; connection to Internet (public).

B. Proposed Technology Environment

1. Software (Client Side / Server side / Mid-range / Mainframe)
   a. Application software
   b. Operating system software
   c. Major interfaces to other systems, both internal and external
   d. General parameters if specific parameters are unknown or to be determined

Response: a. N/A
b. Cisco IOS
c.N/A
d. N/A

2. Hardware (Client Side / Server Side / Mid-range / Mainframe)
   a. Platform, operating system
   b. Storage and physical environment
   c. Connectivity and Bandwidth
   d. Logical and physical connectivity
   e. Major interfaces to other systems, both internal and external
   f. General parameters if specific parameters are unknown or to be determined

Response: a. Core network of Cisco 6513's, 7507's, 5500's running Cisco IOS. Peripheral devices to include 6509's, 2900's, 3500's. Some legacy LS1010, 3900's will remain to support token ring users.
b. Core network housed in ITD Operations, B Level, Hoover Building. Peripheral equipment in locked communications closets or secure operations areas around the campus.
c. Gigabit ethernet between buildings and to key servers; 10/100Mb ethernet, small amount of legacy OC3 and 16Mb token ring.
d. multiple star networks cross connected for redundancy. Fiber and Copper wiring. Primarily TCP/IP protocol
e.. This network connects nearly every agency LAN on the campus as well as a connection to the wide area network for attachment to resources off campus; connection to mainframe; connection to Internet (public). Expanding to provide high speed switched connections to managed workstations at employee locations.

C. Data Elements

If the project creates a new database, provide a description of the data elements.

Response: N/A

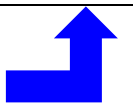
SECTION IV: Financial Analysis

A. Budget: Enter figures and calculate (see formula below) Total Annual Prorated Cost (State Share).

$$\left[\left(\frac{Budget\ Amount}{Useful\ Life}\right)\times \%\ State\ Share\right]+\left(Annual\ Ongoing\ Cost\times \%\ State\ Share\right)=Annual\ \text{Pr}orated\ Cost$$

Budget Line Items	Budget Amount (1st Year Cost)	Useful Life (Years)	% State Share	Annual Ongoing Cost (After 1st Year)	% State Share	Annual Prorated Cost
Agency Staff	$50000	3	100%	$25000	100%	$41666
Software	$90000	4	100%	$10000	100%	$32500
Hardware	$175000	3	100%	$15000	100%	$73333
Training	$0	4	0%	$0	0%	$0
Facilities	$60000	5	100%	$15000	100%	$27000
Professional Services	$15000	4	100%	$15000	100%	$18750
ITD Services	$0	4	0%	$0	0%	$0

Supplies, Maint, etc.	$10000		5		100%		$2000		100%		$4000
Other (Specify)	$0		1		0%		$0		0%		$0
Totals	$400000		-------		-------		$82000		------		$197249



Transfer this amount to the ROI Financial Worksheet, item “D” on page 13.

B. Funding: Enter data or provide response as requested

1. This is (pick one):
   - ☐ A Pooled Technology Fund or Reengineering Fund Request
   - ☒ An Agency IT Expenditure or Budget Request (General Fund, Road Funds, etc)
   - ☐ Other – Specify:

2. On a fiscal year basis, enter the estimated cost by funding source?

	FY03		FY04		FY05	
	Cost ($)	% Total Cost	Cost ($)	% Total Cost	Cost ($)	% Total Cost
State General Fund	$	%	$	%	$	%
Pooled Tech. Fund	$	%	$	%	$	%
Federal Funds	$	%	$	%	$	%
Local Gov. Funds	$	%	$	%	$	%
Grant or Private Funds	$	%	$	%	$	%
Other Funds (Specify)	$400000	100%	$	%	$	%
Total Project Cost	$400000	100%	$	100%	$	100%

If applicable, summarize prior fiscal year funding experience for the project / expenditure.

Response: Funding in FY02 was $325,000.

1. On a fiscal year basis, how much of the total ($ amount and %) project / expenditure cost would be absorbed by your agency from normal operating budgets (all funding sources)?

Response: 100%

2. Identify, list, and quantify all new annual ongoing (maintenance, staffing, etc.) related costs (State $s) that will be incurred after implementation or expenditure.

Response: $82,000

C. ROI Financial Worksheet: Respond to the following and transfer data to the ROI Financial Worksheet (see IVC11) as necessary:

1. Annual Pre-Project Cost – Quantify all actual state government direct and indirect costs (personnel, support, equipment, etc.) associated with the activity, system or process prior to project implementation. This section should be completed only if state government operations costs are expected to be reduced as a result of project implementation.

Response: N/A

2. Annual Post-Project Cost – Quantify all estimated State government direct and indirect costs associated with activity, system or process after project implementation. This section should be completed only if State government operations costs are expected to be reduced as a result of project implementation.

Response: N/A

3. State Government Benefit -- Subtract the total "Annual Post-Project Cost" from the total "Annual Pre-Project Cost." This section should be completed only if State government operations costs are expected to be reduced as a result of project implementation.

Response: N/A

4. Citizen Benefit – Quantify the estimated annual value of the project to Iowa citizens**.** This includes the "hard cost" value of avoiding expenses ("hidden taxes") related to conducting business with State government. These expenses may be of a personal or business nature. They could be related to transportation, the time expended on or waiting for the manual processing of governmental paperwork such as licenses or applications, taking time off work, mailing, or other similar expenses. As a "rule of thumb," use a value of $10 per hour for citizen time savings and $.325 per mile for travel cost savings.

Response: N/A

5. Opportunity Value/Risk or Loss Avoidance Benefit – Quantify the estimated annual non-operations benefit to State government. This could include such items as qualifying for additional matching funds, avoiding the loss of matching funds, avoiding program penalties/sanctions or interest charges, avoiding risks to health/security/safety, avoiding the consequences of not complying with State or federal laws, providing enhanced services, avoiding the consequences of not complying with enterprise technology standards, etc.

Response: N/A

6. Total Annual Project Benefit -- Add the values of all annual benefit categories.

Response: N/A

7. Total Annual Project Cost – It is necessary to estimate and assign a useful life figure to each cost identified in the project budget. Useful life is the amount of time that project related equipment, products, or services are utilized before they are updated or replaced. In general, the useful life of hardware is three (3) years and the useful life of software is four (4) years. Depending upon the nature of the expense, the useful life for other project costs will vary between one (1) and four (4) years. On an exception basis, the useful life of individual project elements or the project as a whole may exceed four (4) years. Additionally, the ROI calculation must include all new annual ongoing costs that are project related. Completing Section IV-A, Project Budget of the evaluation document will provide all the necessary information for this item.

Response: $197,249

8. Benefit / Cost Ratio – Divide the "Total Annual Project Benefit" by the "Total Annual Project Cost." If the resulting figure is greater than one (1.00), then the annual project benefits exceed the annual project cost. If the resulting figure is less than one (1.00), then the annual project benefits are less than the annual project cost.

Response: 0

9. ROI -- Subtract the "Total Annual Project Cost" from the "Total Annual Project Benefit" and divide by the amount of the requested State IT project funds.

Response: 0

10. Benefits Not Readily Quantifiable -- List the project benefits which are not readily quantifiable (i.e. IT innovation, unique system application, utilization of new technology, hidden taxes, improving the quality of life, reducing the government hassle factor, meeting a strategic goal, etc.). Rate the importance of these benefits on a "1 – 10" basis, with "10" being of highest importance. Check the "Benefits Not Readily Quantifiable" box in the applicable row.

Response: This project targets the underlying infrastructure for computer networking on the Capital campus and once implemented will make improvements in speed, simplify the technology used, and build in greater reliability and availability. The design allows for scalability and flexibility to allow growth, expansion of services, and changing applications. Upgrades for the network's physical environment (security, cooling, electrical) also increase reliability.
All of these improvements allow ITD to support key initiatives of State government including Core Network Services/managed desktop, 100%e, and 21st Century Learning. It allows ITD to meet changing and growing requirements of information technology applications. It enables centralized provision of core computing services to workers at overall lower cost and wider accessibility, improving work processes. eGovernment depends on state employees network access to the data they require to serve citizens. Employees will have economical access to training, at their workstations, to effectively serve citizens.

Ratings:		
	8	Infrastructure/bandwidth/accessibility
	7	Centralized services/IT cost efficiencies
	10	Availability/reliability
	9	Performance
	8	Scalability

11. ROI Financial Worksheet

Annual Pre-Project Cost - How You Perform The Function(s) Now	
FTE Cost (salary plus benefits):	$
Support Cost (i.e. office supplies, telephone, pagers, travel, etc.):	$
Other Cost (expense items other than FTEs & support costs, i.e. indirect costs if applicable, etc.):	$
A. Total Annual Pre-Project Cost:	$
Annual Post-Project Cost – How You Propose to Perform the Function(s)	
FTE Cost:	$
Support Cost (i.e. office supplies, telephone, pagers, travel, etc.):	$
Other Cost (expense items other than FTEs & support costs, i.e. indirect costs if applicable, etc.):	$
B. Total Annual Post-Project Cost:	$
State Government Benefit (= A-B):	$
Annual Benefit Summary	
State Government Benefit:	$
Citizen Benefit:	$0
Opportunity Value or Risk/Loss Avoidance Benefit:	$0
C. Total Annual Project Benefit:	$
D. Annual Prorated Cost (SECTION IV-A):	$
Benefit / Cost Ratio: (C / D) =	
Return On Investment (ROI): (C – D / Requested Project Funds) x 100 =	**%**
☒ **Benefits Not Readily Quantifiable**	

Section V: ITC Project Evaluation Criteria

Criteria and Location in Project Evaluation Document		Points
1.	Is the project a statutory requirement; legal requirement; federal or state mandate; health, safety or security requirement or issue; and/or required for compliance with the enterprise technology standards? **Location: Section I-A**	**15**
2.	Will the project improve customer service? **Location: Section I-B.2**	**15**
3.	Does the project have a direct impact on citizens? To what extent does the project help reconnect state government with Iowans? **Location: Section I-B.3**	**10**
4.	Does the project provide a sufficient tangible and/or intangible return on investment? Will it generate savings or income? **Location: Section IV-C**	**10**
5.	Does the project make use of information technology and its practical application in reengineering traditional government processes consistent with the goals and objectives of the state's strategic plans? **Location: Section I-B.1**	**10**
6.	Risk: What are the risks associated with the project? Such risks may include those internal and external to state government, the risk of doing a project, the risk of not doing a project, and the risks associated with changing technologies, potential cost overruns, and changing citizen demands and needs. **Location: Section II-B.5**	**10**
7.	Is this funding required to continue a project that was begun prior to the year funding is being requested for and does it have proven past performance? Is the funding part of a multi-year strategy? **Location: Section II-B1, IVB2**	**10**
8.	Will the project be for only one agency, multiple agencies, or the state government enterprise? **Location: Section I-B3, IIB4**	**10**
9.	Has the applicant maximized their own and other resources in the project? Is alternative funding unavailable for this project? (If no other funding available, project will not be completed without Pooled Technology funding) **Location: Section IV-B.2, IV-B.3**	**5**
10.	What is the credibility of the requester based on past performance on other projects? **Location: Section II-A.2.d**	**5**
	Total	**100**